

**In the Claims:**

1. **(Currently amended)** A process of co-extrusion of a thin electrode sheet with a thin electrolyte polymer sheet directly onto a current collector sheet to form a bi-face assembly for a lithium polymer battery, said process comprising the steps of:

- (a) mixing a polymer with electrochemically active material, lithium salt and electronic conductive material in a first mixing chamber to form [[an]] a first electrode slurry;
- (b) mixing a polymer with a lithium salt in a second mixing chamber to form [[an]] a first electrolyte slurry;
- (c) feeding said first electrode slurry through a first flow channel and said first electrolyte slurry through a second flow channel;
- (d) mixing a polymer with electrochemically active material, lithium salt and electronic conductive material in a third mixing chamber to form a second electrode slurry;
- (e) mixing a polymer with a lithium salt in a fourth mixing chamber to form a second electrolyte slurry;
- (f) feeding said second electrode slurry through a third flow channel and said second electrolyte slurry through a fourth flow channel;
- [[d]] (g) extruding said first electrode slurry in the form of a first thin electrode sheet through a first die opening connected to said first flow channel directly onto a first side of a moving current collector sheet; [[and]]
- [[e]] (h) concurrently extruding said first electrolyte slurry in the form of a first thin electrolyte sheet through a second die opening adjacent to said first die opening and connected to said second flow channel, said first thin electrolyte sheet being extruded directly onto said first thin electrode sheet; [[.]]
- (i) extruding said second electrode slurry in the form of a second thin electrode sheet through a third die opening connected to said third flow channel directly onto a second side of the moving current collector sheet; and
- (k) concurrently extruding said second electrolyte slurry in the form of a second thin electrolyte sheet through a fourth die opening adjacent to said third die opening and connected to said fourth flow channel, said second thin electrolyte sheet being extruded directly onto said second thin electrode sheet.

2. **(Cancelled)**
3. **(Cancelled)**
4. **(Original)** A process of co-extrusion as defined in claim 1 ~~[[2]]~~ wherein said first thin electrode sheet and said first thin electrolyte sheet are extruded through a first slot die having a pair of flow channels and a pair of slot openings and said second thin electrode sheet and said second thin electrolyte sheet are extruded through a second slot die having a pair of flow channels and a pair of slot openings.
5. **(Currently amended)** A process of co-extrusion as defined in claim 1 ~~[[3]]~~ wherein ~~a pair of~~ said first and second thin electrode sheets and ~~a pair of~~ said first and second thin electrolyte sheets are extruded through a multiple slot die having four flow channels and four slot openings.
6. **(Currently amended)** A process of co-extrusion as defined in claim 5 wherein said multiple slot die comprises a central channel adapted to guide said current collector between said four slot openings such that ~~[[a]]~~ said first thin electrode sheet and ~~[[a]]~~ said first thin electrolyte sheet are extruded on the first side ~~[both sides]~~ of said moving current collector and said second thin electrode sheet and said second thin electrolyte sheet are extruded on the second side of said moving current collector.
7. **(Currently amended)** A process of co-extrusion as defined in claim 1 wherein said first and second electrode sheets ~~two layers of cathode material~~ are extruded on the first and second ~~[each]~~ side of said moving current collector respectively through a first slot die having a pair of flow channels and said first and second electrolyte sheets ~~two layers of electrolyte material~~ are extruded directly onto said first and second electrode sheets respectively ~~two layers of cathode material~~ through a second die having a pair of flow channels.
8. **(Currently amended)** A process of co-extrusion as defined in claim 7 wherein said first slot die comprises a central channel adapted to guide said moving current collector between said pair of flow channels such that a thin electrode sheet is extruded on both sides of said current collector.

9. **(Currently amended)** A process of co-extrusion as defined in claim 8 wherein said second slot die comprises a central channel adapted to guide said moving current collector with said first and second electrode sheets ~~said two layers of cathode material~~ between said pair of flow channels such that said first and second electrolyte sheets ~~a thin electrolyte sheet~~ are ~~is~~ extruded onto said first and second electrode sheets respectively [each said layers of cathode material] on both sides of said moving current collector sheet.

10. **(Currently amended)** A process of co-extrusion as defined in claim ~~[[3]]~~ 1 wherein said first and second thin electrode sheets and said first and second thin electrolyte sheets are extruded through a pair of slot dies located on both sides of said moving current collector sheet, each of said pair of slot dies having two flow channels and two die openings respectively for extruding said first and second thin electrode sheet directly onto said moving current collector sheet and for extruding said first and second thin electrolyte sheet directly onto said first and second thin electrode sheet respectively.

11. **(Currently amended)** A process of co-extrusion as defined in claim ~~[[3]]~~ 1 wherein said first and second thin electrode sheets are extruded through a first pair of slot dies located on each side of said moving current collector sheet and said first and second thin electrolyte sheets are extruded through a second pair of slot dies located on each side of said moving current collector sheet.

12. **(Currently amended)** A process of co-extrusion as defined in claim 1 further comprising means for adjusting the thickness of said first and second thin electrode sheets and the thickness of said first and second thin electrolyte sheets.

13. **(Currently amended)** A process of co-extrusion as defined in claim 12 further comprising means for measuring said thickness of said first and second thin electrode sheets and said thickness of said first and second thin electrolyte sheets.

14. **(Original)** A process of co-extrusion as defined in claim 13 wherein said means for measuring is a measuring device selected from the group consisting of mechanical device, optical device, ultra-sonic device, Gamma gauge and Beta gauge.

15. **(Original)** A process of co-extrusion as defined in claim 13 further comprising an electronic control unit linked to said means for measuring said thickness and to said means for adjusting the thickness; said electronic control unit receiving measurement data from said means for measuring said thickness, comparing said received measurement data to pre-set thickness tolerances stored into memory and, when thickness measurement fall outside the preset tolerances, sending signals to said means for adjusting the thickness to effect adjustment of the extruded layers.

16. **(Previously Canceled)**